

SEP 11 2000



UNIVERSITY OF ALBERTA
COLLABORATIVE BACCALAUREATE
NURSING PROGRAM

Grande Prairie Regional College
Grant MacEwan College
Keyano College
Red Deer College
University of Alberta

NURSING 3010
Part I
Evidence Based Research
Course Outline

Fall, 2000

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Approved ()

Evidence Based Research (NS 3010)

Fall, 2000

Instructor:

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Course Hours:

Research: Thursdays 1030-1120

NS 3010 is integrated with NS 3900 learning packages.

Note: NS 3010 is completed over Years 3 and 4. Registration for NS 3010 will occur in Year 4. Your marks for the Part I of this course will be tracked but a final grade will only be assigned in Year 4.

NURSING RESEARCH & STATISTICS

Introduction to the process of research through critical appraisals of selected quantitative and qualitative studies. Emphasis will be on understanding the research process and in knowing how to critically read, analyze, and begin to apply the knowledge gained from research in practice. The focus of this course will be the planning phase of the research process and descriptive

Pre/Co-Requisite: NS 3900**Course Description**

Introduction to the process of research through critical appraisals of selected quantitative and qualitative studies. Emphasis will be on understanding the research process and in knowing how to critically read, analyze and begin to apply the knowledge gained from research in practice. The focus of this course will be the planning phase of the research process which includes: research problem and purpose, literature review, theoretical/conceptual frameworks, variables, research questions and hypotheses, ethics of research, research designs, and population and samples. Also included are descriptive statistics.

Course Objectives:

1. Describe the purpose and importance of research in nursing
2. Describe how theory, practice, and research are related
3. Identify a question from nursing practice that can be answered by research.
4. Describe nurses' roles in research.
5. Apply critiquing criteria for the critical analysis of the following sections of a research report: research problem and purpose, literature review, theoretical/conceptual framework, variables, research questions and hypotheses, research design, ethical components, population, sample, and sampling procedures.
6. Compare the major characteristics, strengths, and limitations of quantitative and qualitative research.
7. Explain the meaning of internal and external validity of research
8. Develop a systematic approach for reading and critical analysis of selected components of published research.
9. Describe the four levels of measurement.
10. State the purposes of descriptive statistics.
11. Critically analyze the descriptive statistics used in published reports.
12. Explore ethical considerations in the conduct of research.

SUGGESTED LEARNING ACTIVITIES

Students will participate in two primary activities to assist in meeting the objectives of the course

1. Attendance at Fixed Resource Sessions

The purpose of the FRS's is to highlight primary concepts of the research process and to develop the students' ability to understand and critique research through discussion of critiques. In the FRS's, essential concepts related to nursing research and statistics will be discussed. Additionally, students will have the opportunity to discuss group critiques of selected articles to assist in understanding of the concepts.

2. Small Group Work

The purpose of this activity is to provide students with an opportunity weekly to critique selected aspects of a research study using the critiquing criteria. Each week the instructor(s) will select a research report from the list of *Research & Statistics References* for Nursing 3900. It is anticipated that the research reports students are to critique will be relevant to the scenarios being covered in the learning packages. Students are expected to read each assigned research report and answer the critiquing questions included in the course outline **prior to attending the FRS**. For example, prior to the FRS on the planning phase of the research process, students

will be expected to critique the research problem/questions, literature review, theoretical framework and hypothesis in the assigned article.

Students are encouraged to work in pairs or small groups to complete their critique (answer the critique questions) of the aspects of the assigned study for discussion in the weekly FRS. Faculty assigned as resources for the course will assist student groups with the process of critiquing between fixed resource sessions. During FRS's, students will be asked to present their evaluation of the selected aspects of the research report.

Opportunities for discussion, debate and consensus will be provided. Critical thinking should be emphasized throughout the process.

3. Appraising Findings from Multiple Studies

The importance of appraising findings from multiple studies related to a nursing practice issue for guiding practice will be the focus of this activity. In addition to the article selected in N3010 for critique, students are expected to read at least one of the recommended research articles identified in each N3900 learning package, and discuss the findings with other members of the N3900 tutorial group. (E. g. Students distribute the research articles among the group, with each student reporting on a different research article related to the scenario.)

YEAR III**Recommended Fixed Resources Sessions****Nursing Research**

1. Overview of Nursing Research
Review role of Nursing Research
Methods of Inquiry
Framework for Critiquing
Expectations, Process and
Assigned Activities
2. Critique of Planning Phase of
Research Process
Identification of Research
problems/questions/purpose
Literature Review
3. Placement of Problems within a
Conceptual Framework
Definition of Variables
Formulation of Hypothesis
4. Characteristics of Designs cont'd
Qualitative - e.g.
phenomenology, grounded
theory, etc.
5. Critiques of Research Design Quantitative:
Experimental, Quasi-Experimental, Non-experimental
6. Critique of Sample, protection of human/legal rights.

EVALUATION (YEAR III)

1. Test (45%): Date: TBA

Nursing Research Concepts

2. Paper (55%): Due: October 30, 2000 by 1600 h

Refer to your student handbook for the GPRC grading policy for final stanine ranges.

Critique of the Conceptual Phase, Research Design and Sample

Using a published nursing research report selected by the instructor, the student will critique the conceptual phase, research design and sample of the reported research. In this critique, the student will use criteria and concepts from small group work, fixed resource sessions and readings to evaluate the research question/problem, purpose, literature review, conceptual framework, hypothesis, research design and sample of the research report. APA format and scholarly writing is expected. See critiquing guidelines (page 13). Marking guideline for paper on page 17.

Length of paper about 8 pages, double spaced.

[NOTE: It is recommended that an experimental or quasi-experimental study be chosen. Critique of qualitative research will occur in Year IV.]

Assignment Policy

All assignments are to be passed in at the time and place they are due. Extensions on assignments may be granted and must be negotiated with the instructor prior to the due date and with a date specified for late submissions.

A penalty of 5% for each working day that an assignment is submitted after the due date will be deducted from the final mark. For example, a paper scored at 75% would receive an adjusted grade of 70% if handed in one day late. Late assignments are due by 1600h and must be verified (stamped with date and time) by nursing office personnel.

FRS Guide

Week #1: Introduction to course; process for class, choose working groups, review of course outline.

Week #2: Nursing Organizations

Text Readings: Chapters 1 and 2 Lobiondo-Wood and Haber

Key Concept Questions - Appraising Multiple Research Articles

Instructions: Find a partner, bring four articles (research) in an area of nursing practice that you have appraised. Discussion will occur in the large group related to areas of confusion/concern/applicability etc. Using the appropriate guide, appraise your collection of research articles (see page 18).

Answer the following questions:

1. What differences did you note in the process of appraising one article versus multiple research articles?
2. What insight have you gained regarding research evidence and implications for nursing practice?

Week #3: "Courtney"

Key Concept Questions – Initial Phases of the Research Process

Text Readings: Chapter 3, 4, and 5

1. Was the problem clearly identified? What is the relationship of this research problem with this scenario? Is the purpose of the research clear?
2. Have important gaps or inconsistencies of findings of previous research been clearly stated? What evidence has been provided to support the necessity for this study?
3. Is the research theory linked? If theory linked, was theory being developed, tested, or verified.
4. Are research questions or hypotheses used in the study? Identify the variables. Have all concepts and variables been defined?

Adesunkanmi, A. R. K., Oginni, L. M., Oyelami, A. O., & Badru, O. S. (1998). Epidemiology of childhood injury The Journal of Trauma, Injury, Infection, and Critical Care, 44 (3), 506-512.

Blakeney, P., Meyer, W., Robert, R., Desai, M., Wolf, S., & Herndon, D. (1998). Long-term psychosocial adaptation of children who survive burns involving 80% or

greater total body surface area. The Journal of Trauma, Injury, Infection, and Critical Care, 44 (4), 625-634.

Kravitz, M., McCoy, B. J., Tompkins, D. M., Daly, W., Mulligan, J., McCauley, R. L., Robson, M. C., & Herndon, D. N. (1993). Sleep disorders in children after burn injury. Journal of Burn Care & Rehabilitation, 14 (1), 83-90.

Scheidt, P. C., Harel, Y., Trumble, A. C., Jones, D. H., Overpeck, M. D., & Bijur, P. E. (1995). The epidemiology of nonfatal injuries among US children and youth. American Journal of Public Health, 85 (7), 932-938.

Week #4: "Jennifer Hardy"

Key Concept Questions – Descriptive Research Designs

Text Readings: Chapter 9

From one of the assigned readings of a qualitative study from research and stats, answer the following questions:

1. What qualitative method was chosen for the study? How do you know?
2. Is the research method appropriate for the purpose of the study?
3. What other methods may have been appropriate?
4. What did the researcher(s) do to ensure rigor in the study? i.e. consistency in data collection and analysis, confirmability of findings?

Brydolf, M & Segesten, K. (1996) Living with ulcerative colitis: Experiences of adolescents and young adults. Journal of Advanced Nursing, 23 (1), 39-47.

Deeny, P. & McCrea, H. (1991) Stoma care: The patient's perspective. Journal of Advanced Nursing, 16 (1), 39-46.

Salter, M. J. (1992). What are the differences in body image between patients with a conventional stoma compared with those who have had a conventional stoma followed by a continent pouch? Journal of Advanced Nursing, 17 (7), 841-848.

Week #5: "Doris Mary Lawrence"

Key Concept Questions – Research Designs con't

Text Reading: Chapter 6

Using a quantitative study related to this scenario answer the following questions:

1. What design was chosen for the study? Why is it important to know the design? Does it relate to how much is known about a topic?
2. Was the design appropriate for the purpose? (ie to describe, to determine cause/effect relationship, or to determine relationship of association)
3. Does the design seem to flow from the proposed research problem, theoretical framework (if there is one), literature review, and hypothesis/research questions?

Beckie, T. (1989). A supportive-educative telephone program: Impact on knowledge and anxiety after coronary artery bypass graft surgery. Heart & Lung, 18 (1), 46-55.

Hase, S & Douglas, A. (1987). Effects of relaxation training on recovery from myocardial infarction. The Australian Journal of Advanced Nursing, 5 (1), 18-27.

Katzel, L. I., Bleeckner E. R., Colman, E. G., Rogus, E. M., Sorkin, J. D., & Goldberg, A. P. (1995). Effects of weight loss vs aerobic exercise training on risk factors for coronary disease in health, obese, middle-aged and older men. JAMA, 274 (24), 1915-1921.

Meischke, H., Eisenberg, M. S., Schaeffer, S. M., Larsen, M. P., & Henwood, D. K. (1994). Impact of direct mail intervention on knowledge, attitudes, and behavioral intentions regarding use of emergency medical services for symptoms of acute myocardial infarction. Evaluation & the Health Professions, 17 (4), 402-417

Rosano, G., M. C., Sarrel, P. M., Poole-Wilson, P. A., & Collins, P. (1993). Beneficial effect of oestrogen on exercise-induced myocardial ischaemia in women with coronary artery disease. The Lancet, 342, 133-163.

Week #6: "Doris Mary Lawrence"

Key Concept Questions – Research Designs con't

Text Readings: Chapter 7 and 8

Non-experimental Designs

1. What is the overall purpose of non-experimental designs?
2. What are the characteristics of descriptive/exploratory designs?
3. What are the characteristics of interrelationship/difference designs?
4. When reading the research article ask yourself the following questions:
 - i) is the design suited to the data collection methods?
 - ii) based on the literature review, is the rationale for the design evident?
 - iii) is the presentation of the results consistent with the design?

Experimental and Quasiexperimental Designs

1. Lobiondo-Wood and Haber (1998) identify three properties of a true experimental design - random assignment to a group, control and manipulation, do the above research studies fit any or all of these properties?
2. What is the major difference between experimental and quasiexperimental designs?
3. What are extraneous variables?
4. What factors in clinical research may preclude the use of true experimental designs?
5. Why are experimental designs more appropriate for testing cause-and-effect relationships?
6. What are the potential threats to the internal validity of these studies?
7. In what ways did the researchers try to control for these potential threats?
8. Can the findings be generalized to a larger population?
9. How have the limitations of the design been addressed?

Week #7: "Cindy O."

Key Concept Questions – Population and Sampling

Text Reading: Chapter 10

From one of the research and stats articles related to this scenario, answer the following questions;

1. Has the target population been identified?
2. How was the sample selected? Is this an appropriate method for the design?
3. What were the criteria for eligibility/ineligibility for sample selection? How might this study have been changed if the sample been selected differently?
4. What are the characteristics of the sample? Does this sample represent the target population as identified in the problem statement? To what population can the findings be generalized?
5. Is the sample size appropriate? How do you know?

Olson, J. K. (1995). Relationships between nurse-expressed empathy, patient-perceived empathy and patient distress. *Image: Journal of Nursing Scholarship*, 27 (4) 317-321.

Novacek, J. & Raskin, R. (1998). Recognition of warning signs: A consideration for cost-effective treatment of severe mental illness. *Psychiatric Services*, 49 (3), 376-378.

Garner, R., Butler, G., & Hutchings, D. (1996). A study of the relationship between the patterns of planned activity and incidents of deliberate self-harm within a regional secure unit. *British Journal of Occupational Therapy*, 59 (4), 156-160.

Donohue, M. V., Labovitz, D. R., & Miller, R. J. (1990). Social competence of female psychiatric patients: A study of sociability, social presence, socialization, diagnoses, and age of onset of psychosis. *Occupational Therapy Journal of Research*, 10 (3), 163-76.